# 08 - ELECTRICAL- ILLUMINATION INDEX OF DRAWINGS

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
ILL-01	ELECTRICAL - ILLUMINATION INDEX OF DRAWINGS		
ILL-02	GENERAL NOTES AND LEGEND		
ILL-03	TEMPORARY ILLUMINATION PLAN PRE - STAGE 1		
ILL-04	TEMPORARY ILLUMINATION PLAN STAGE 1		
ILL-05	TEMPORARY ILLUMINATION PLAN STAGE 2		
ILL-06	TEMPORARY ILLUMINATION PLAN STAGE 3		
ILL-07	PERMANENT ILLUMINATION PLAN 1		
ILL-08	PERMANENT ILLUMINATION PLAN 2		
ILL-09	PERMANENT ILLUMINATION PLAN 3		
ILL-10	LIGHT STANDARD DIMENSION TABLE		
ILL-11	MEDIAN SHAPED LIGHT STANDARD FOUNDATIONS		
ILL-12	ELECTRICAL CONNECTIONS		
ILL-13	TEMPORARY LIGHT STANDARD ATTACHMENT BRACKET		
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CONNECTICUT DEPARTMENT OF TRANSPORTATION

REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

**ENFIELD** 

ELECTRICAL ILLUMINATION INDEX OF
DRAWINGS

ILL-01 0048-0200 SHEET NO.:

#### **GENERAL NOTES**

- 1) THE CONTRACTOR SHALL ORGANIZE THE WORK SO THAT ANY PORTION OF THE ROADWAY WHICH HAS EXISTING ILLUMINATION AND IS OPEN FOR USE REMAINS LIGHTED. THE LIGHTING MAY CONSIST OF: 1) EXISTING LIGHTING, 2) NEW LIGHTING, 3) TEMPORARY LIGHTING, OR ANY COMBINATION OF THE ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STAGE THE INSTALLATION OF NEW LIGHTING AND SERVICE CABINETS SO THAT ALL ROADWAYS WITH EXISTING ILLUMINATION ARE CONTINUOUSLY LIGHTED. IF IT IS NECESSARY TO INSTALL TEMPORARY POLES, LIGHTS OR CIRCUITRY, THAT WORK SHALL BE SUMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO INSTALLATION, AND WILL BE PAID FOR AT THE BID UNIT PRICE FOR THESE ITEMS. THE CONTRACTOR SHALL INSTALL TEMPORARY ILLUMINATION UNITS AT A UNIFORM SPACING NOT TO EXCEED 180'. WHERE NECESSARY, PRE-ASSEMBLED AERIAL CABLE SHALL BE INSTALLED TO MAINTAIN THE CONTINUITY OF THE LIGHTING CIRCUITS. GUY WIRES AND ANCHORS SHALL BE INSTALLED ON ALL LIGHT POLES SUBJECTED TO AERIAL CABLE ATTACHMENT. THE CONTRACTOR SHALL MAINTAIN ALL LIGHTING THROUGHOUT THE DURATION OF THE PROJECT SEE SECTION 10.00.14 FOR SPECIFIC REQUIREMENTS.
- 2) ALL ELECTRICAL WORK SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, CONNECTICUT STANDARD SPECIFICATIONS, AND WHERE APPLICABLE. UTILITY COMPANY REGULATIONS.
- 3) CONDUCTORS SHALL BE COPPER, INSULATION TYPE XHHW AND RATED FOR 600 VOLTS. INSULATION SHALL BE COLORED CROSS LINKED POLYETHELENE (XLP). THREE PHASE CIRCUIT COLORS SHALL BE AS FOLLOWS: BLUE, BLACK, RED.
- 4) INSTALL ONE NUMBER 8 BARE COPPER GROUNDING CONDUCTOR THROUGHOUT ALL LIGHTING CIRCUITS.
- 5) LOCATION OF EXISTING ILLUMINATION ON PLANS IS APPROXIMATE. FOR EXISTING ILLUMINATION SEE THE FOLLOWING STATE PROJECT: 48-138
- 6) THE CONTRACTOR SHALL ABIDE BY THE CONNDOT LOCKOUT/TAGOUT PROCEDURES WHEN ACCESS TO A CIRCUIT IS REQUIRED. THE CONTRACTOR SHALL CONTACT THE DISTRICT 1 ELECTRICAL SUPERVISOR AT TELEPHONE (860)-566-3156, WHEN ACCESS TO A CIRCUIT IS REQUIRED.
- 7) WHERE EXISTING P.V.C. IS TO BE RE-USED, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING CONDUCTORS WITHIN THE CONDUIT.
- 8) LIGHT STANDARD FOUNDATIONS SHALL BE INSTALLED AS FOLLOWS (DISTANCE TO CENTERLINE OF POLE) OR AS INDICATED ON THE PLANS.

A - 7' FROM EDGE OF PAVEMENT

- B 2' BEHIND GUIDE RAIL OR 4' FROM EDGE OF PAVEMENT WHERE NO GUIDERAIL IS PRESENT
- C ANCHOR BASE MOUNTED ON BRIDGE WALL
- D MEDIAN SHAPED FOUNDATION
- 9) ALL PVC CONDUIT SHALL BE SCHEDULE 80.
- 10) EXISTING HIGHWAY LIGHTING CONTROL CABINETS:

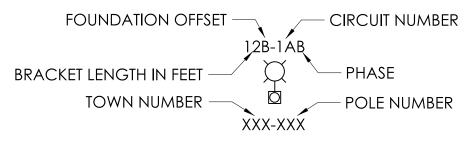
HAZARD AVE. (ROUTE 190), EXIT 47, I-91 N.B. RAMP 480/277 VOLT, 3 PHASE, 3 WIRE.

ENFIELD STREET (ROUTE 5), EXIT 49, I-91 S.B. RAMP 480/277 VOLT, 3 PHASE, 3 WIRE.

- 11) LIGHT STANDARDS WITH BRACKETS AND LUMINAIRES SHALL BE DESIGNED TO WITHSTAND A WIND SPEED OF 90 MPH.
- 12) TAPE ALL UNUSED CONDUCTORS.
- 12) THE CONTRACTOR SHALL CONTACT THE D1 ELECTRICAL SUPERVISOR ((860)-566-3156) FOR LUMINAIRES SALVAGED FROM EXISTING TWIN ARM MEDIAN LIGHT STANDARDS FOR PICKUP/DROP OFF INSTRUCTIONS

#### **ABBREVIATIONS**

EDGE OF ROADWAY UNLESS OTHERWISE NOTED



TYPICAL ILLUMINATION UNIT

ILLUMINATION LEGEND

EXISTING MEDIAN FOUNDATION MOUNTED ALUMINUM LIGHT STANDARD AND LUMINAIRE TO REMAIN

 $\square$  EXISTING LIGHT STANDARD, FOUNDATION, AND LUMINAIRE TO BE REMOVED, SALVAGE LUMINAIRES

TEMPORARY ILLUMINATION UNIT (ITEM #1020030A)-DIRECT BURRIED U.O.N.

TEMPORARY ILLUMINATION UNIT (ITEM #1020030A) MOUNTED ON TEMPORARY LIGHT STANDARD ATTACHMENT BRACKET (ITEM #1020998A) - TYPICAL

TWIN ARM ALUMINUM LIGHT STANDARD (TRANSFORMER BASE) AND LIGHT STANDARD FOUNDATION - TYPE III WITH LED ROADWAY LUMINAIRES- TYPE 2 (18,000\* LUMEN, TYPE II DIST., FULL-CUTOFF, 40' MOUNTING HEIGHT) \* APPROXIMATE INITIAL LUMEN VALUE

NON-BREAK AWAY DIRECT BURIED POLE

-▲--▼-- EXISTING PVC CONDUIT IN MEDIAN

 $- \blacksquare - \nabla - \blacksquare - \nabla - 2\frac{1}{2}$ " PVC (SCHED. 80) IN MEDIAN(3 #2, 1 #8 BARE GND., (U.O.N.))

CONNECTICUT DEPARTMENT OF **TRANSPORTATION**  REHABILITATION OF BRIDGE NO. 05585 CARRYING

INTERSTATE 91 OVER GRAPE BROOK

town(s):

**ENFIELD** 

DRAWING TITLE:

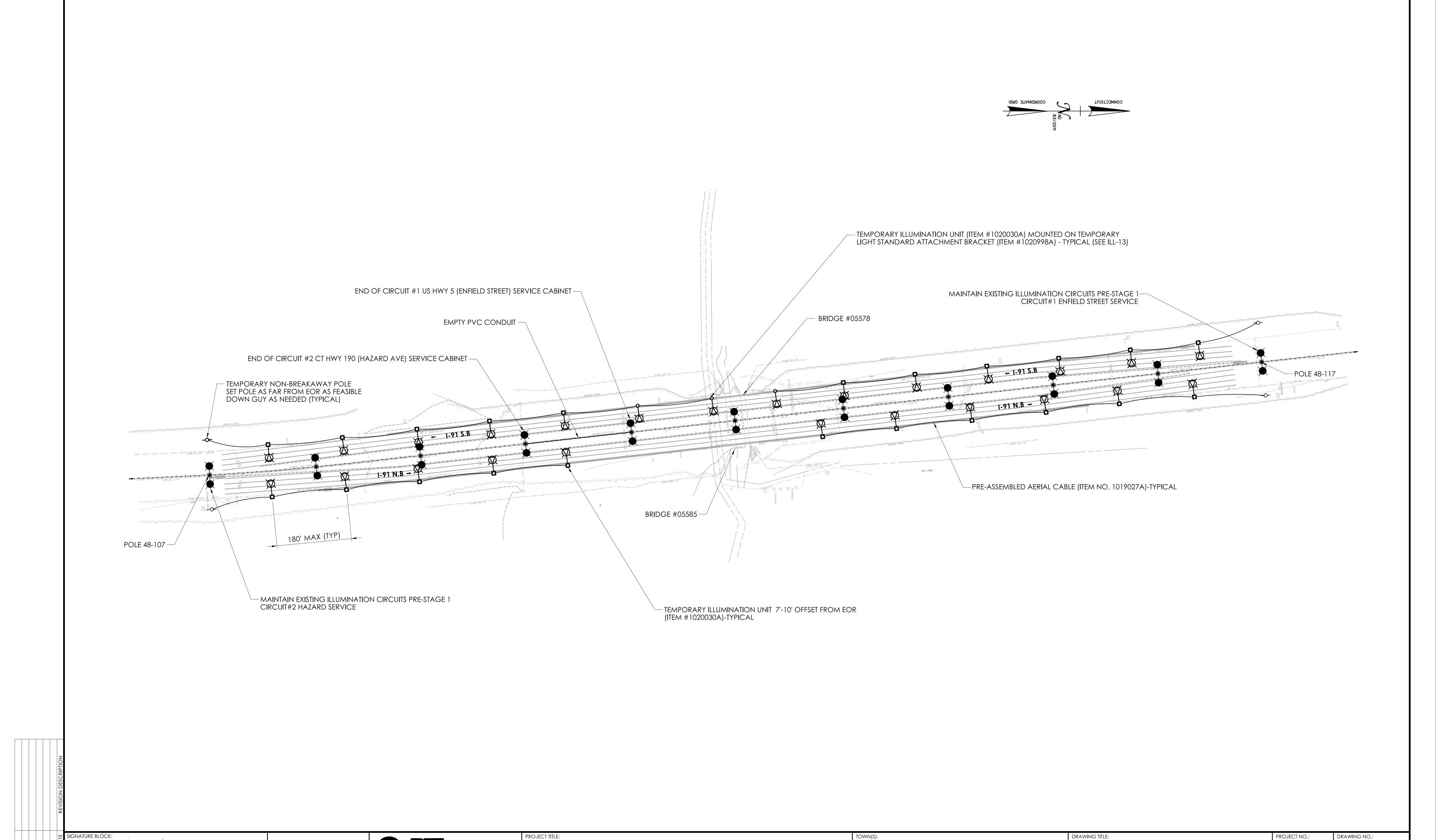
**GENERAL NOTES AND** 

**LEGEND** 

PROJECT NO.:

**ILL-02** 0048-0200 SHEET NO.

DESIGNER/DRAFTER: JDV LASTED SAVED BY: VeturisJD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-02.dgn



REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

TEMPORARY
ILLUMINATION PLAN PRESTAGE 1

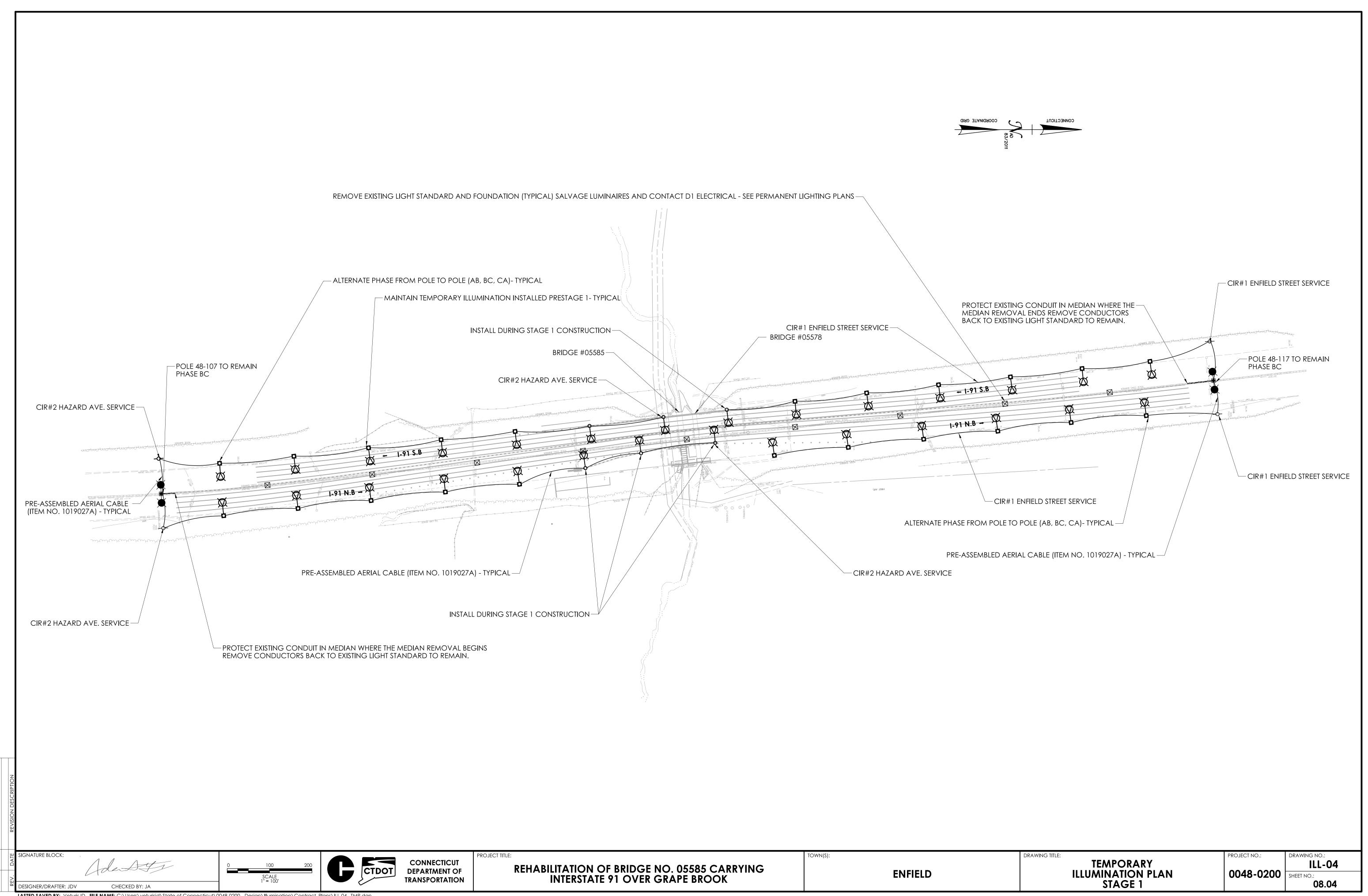
**ENFIELD** 

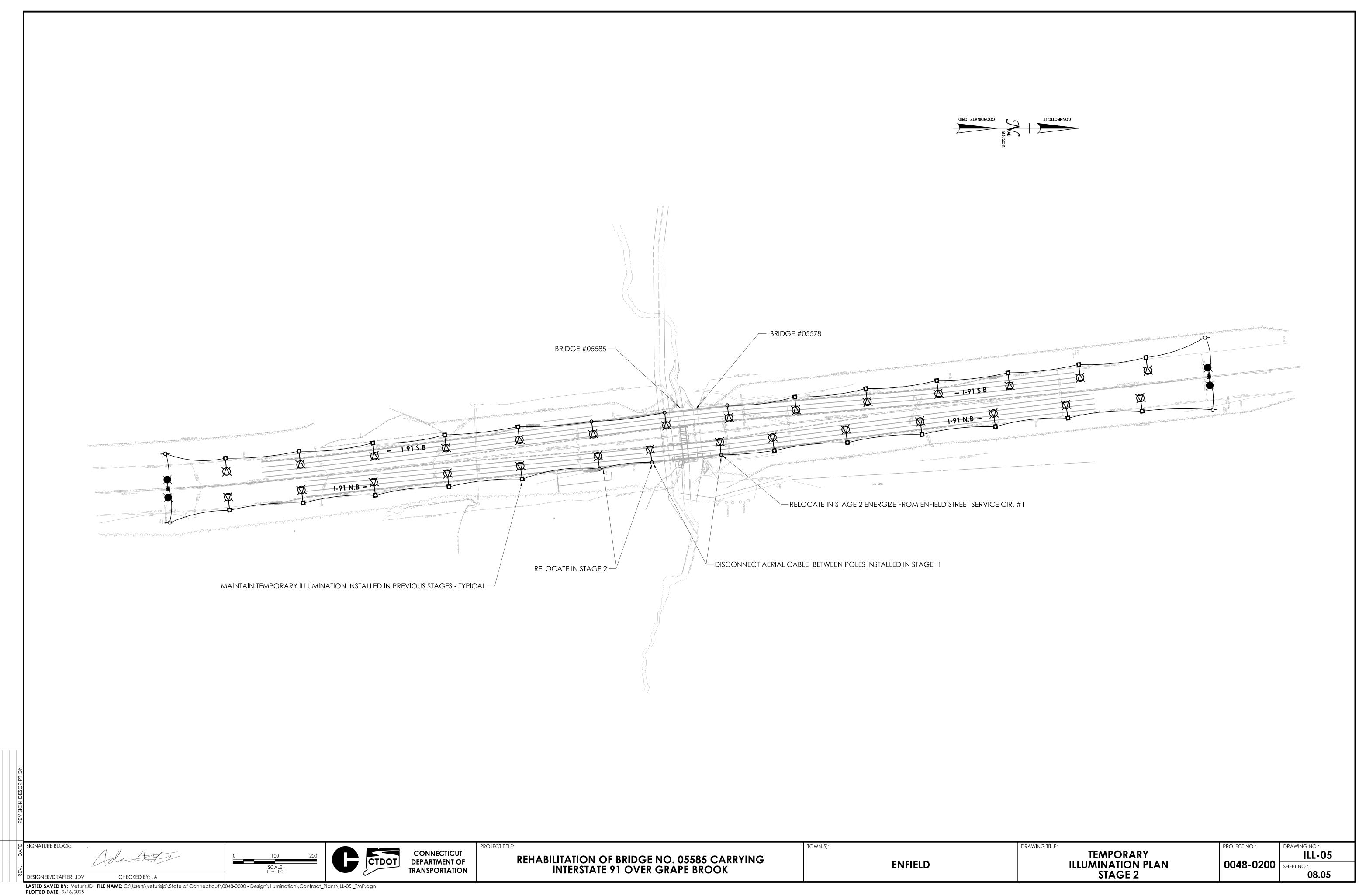
**ILL-03** 

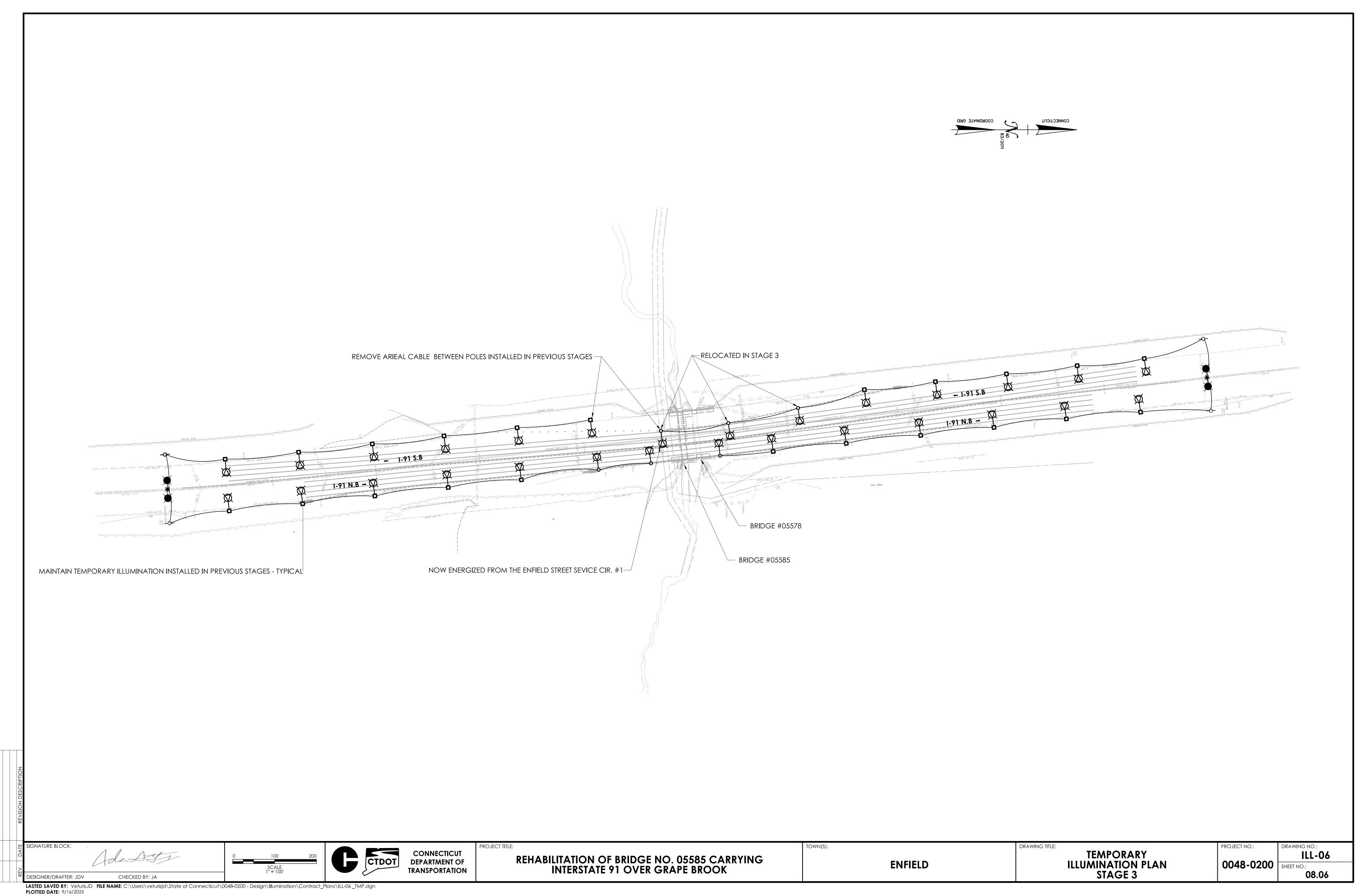
0048-0200 SHEET NO.:

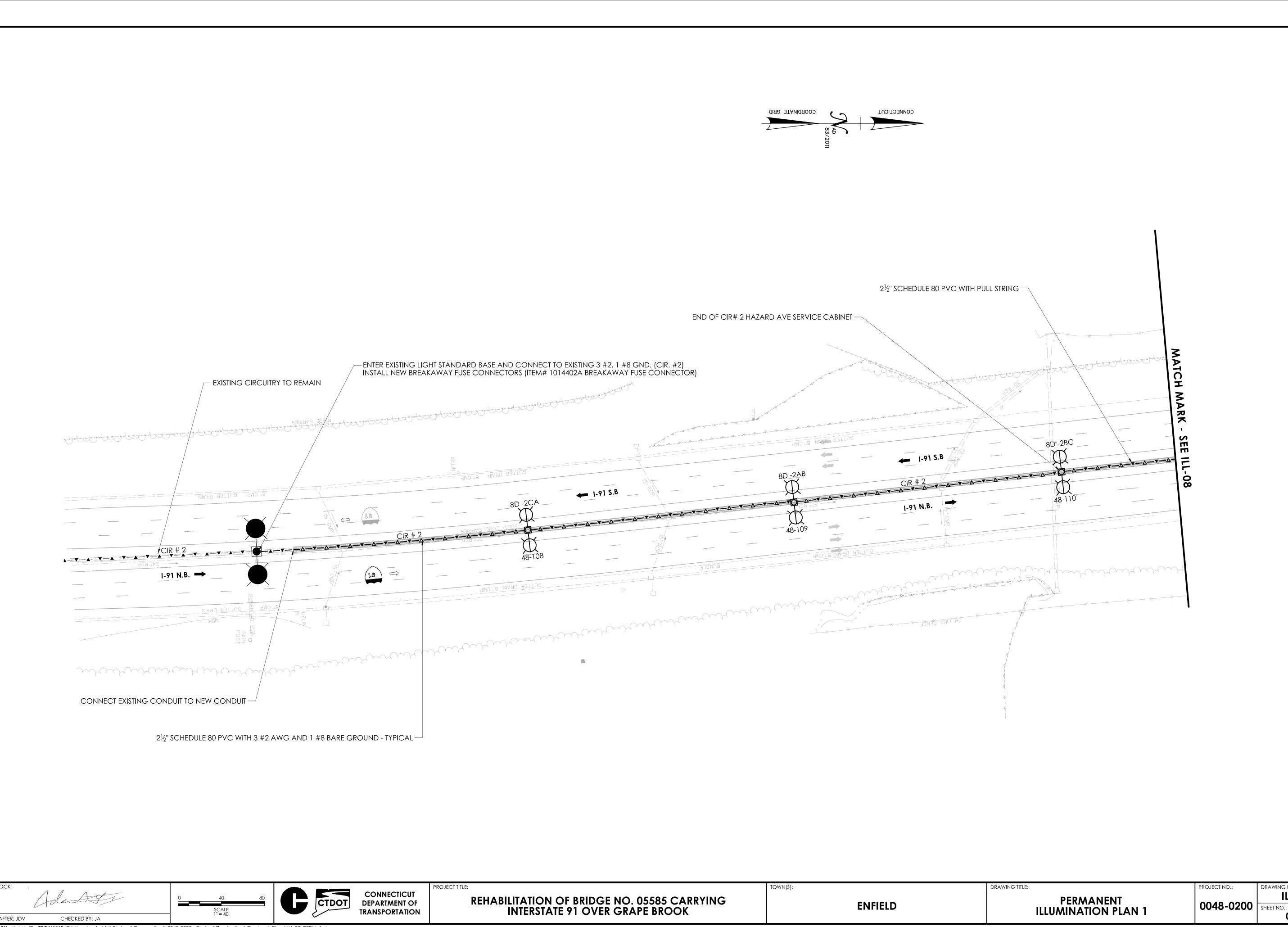
LASTED SAVED BY: VeturisJD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-03\_TMP.dgn PLOTTED DATE: 9/16/2025

CONNECTICUT DEPARTMENT OF TRANSPORTATION





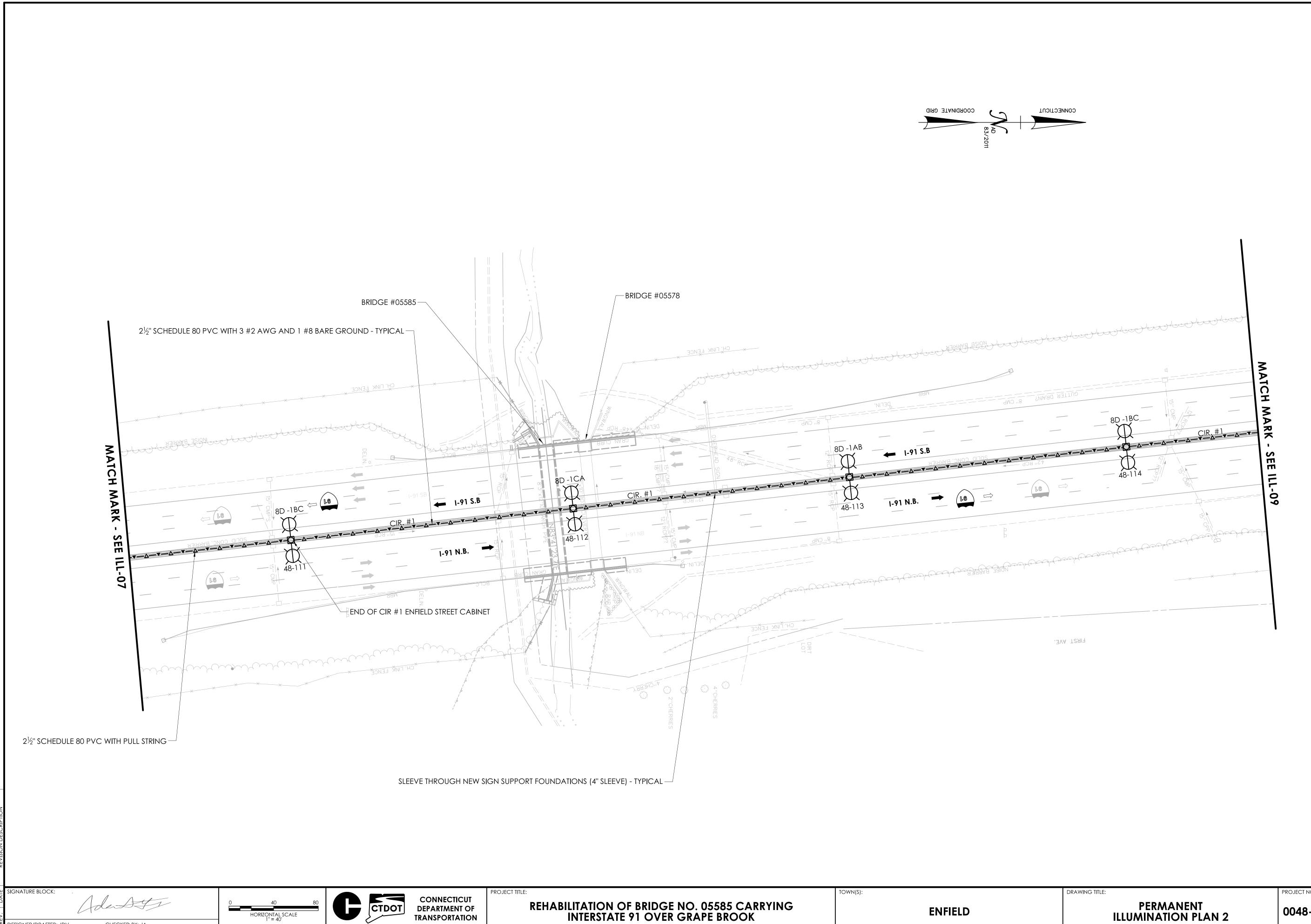




**ILL-07** 

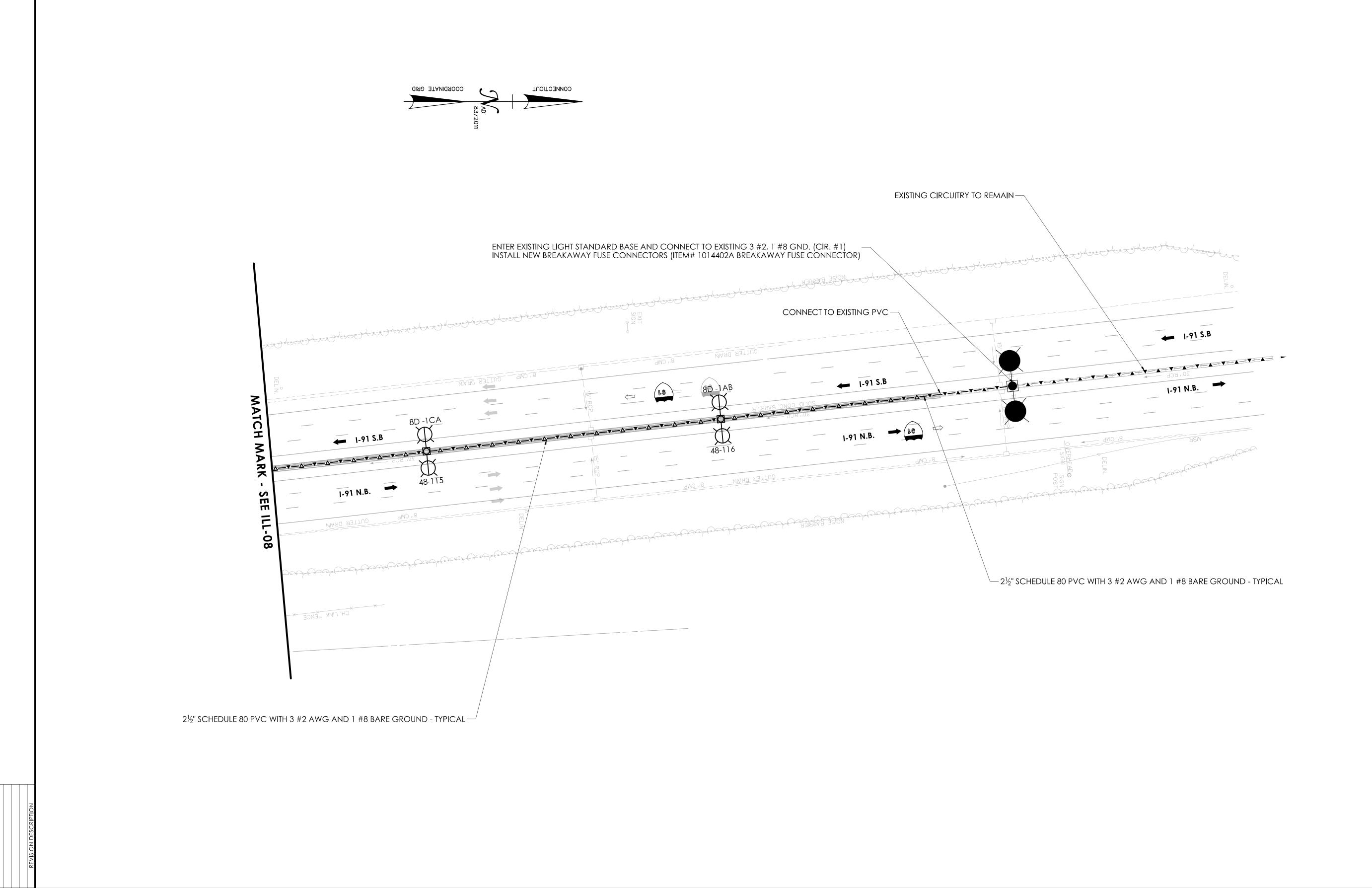
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LASTED SAVED BY: VeturisJD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-07\_PERM\_1.dgn PLOTTED DATE: 9/16/2025



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**ILL-08** 0048-0200 SHEET NO.: 80.80



REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

TOWN(S):

**ENFIELD** 

DRAWING TITLE:

PERMANENT ILLUMINATION PLAN 3

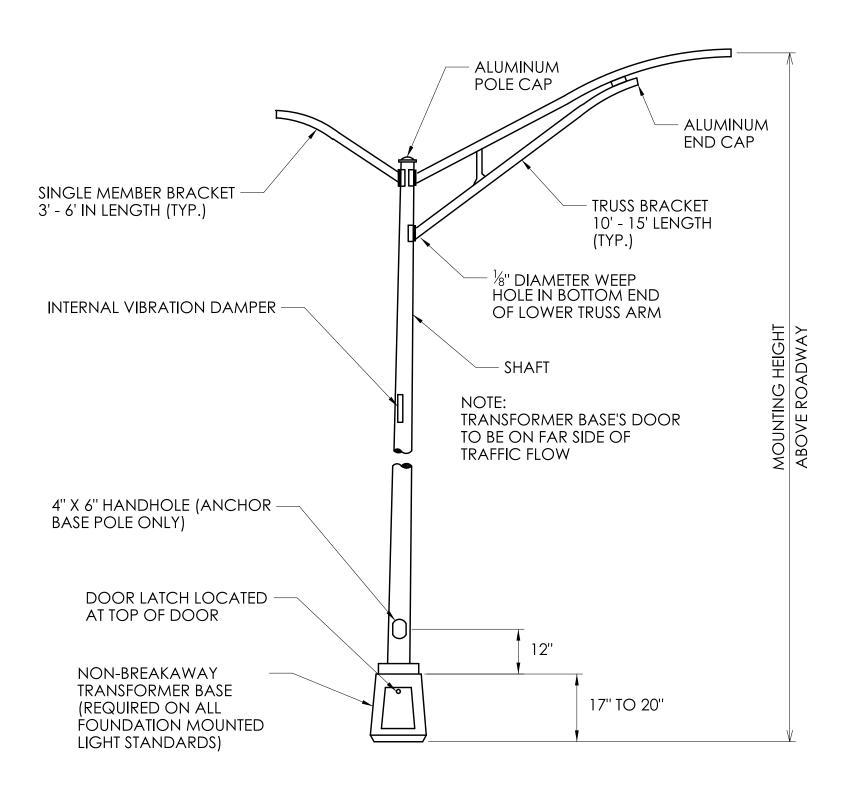
**ILL-09** 

08.09

0048-0200 SHEET NO.:

LASTED SAVED BY: VeturisJD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-09\_PERM\_3.dgn PLOTTED DATE: 9/16/2025

CONNECTICUT DEPARTMENT OF TRANSPORTATION



# ALUMINUM LIGHT STANDARD

ALUMINUM LIGHT STANDARD - DIMENSION TABLE										
MOUNTING HEIGHT	BRACKET LENGTH	Shaft Di	AMETER	SHAFT WALL THICKNESS	BASE TYPE	ANCHOR BOLT SIZE	BOLT CIRCLE DIAMETER			
		воттом	TOP							
40'*	8"	10"	6"	.219"	NON BREAK-AWAY T-BASE	SEE MEDIAN FOUNDATION DETAIL	15"			

<sup>\*40&#</sup>x27; MOUNTING HEIGHT OVERALL INCLUDES THE OVERALL MEDIAN HIEGHT

## LIGHT STANDARD NOTES:

- ALUMINUM ALLOY SHALL BE 6063, T6 TEMPER.
- BOLT CIRCLE SHOWN IS FOR ANCHOR BASE BOTTOM OR TRANSFORMER BASE BOTTOM (WHICHEVER IS APPLICABLE).
- TO BE DESIGNED TO AASHTO "STANDARD SPECIFICATION FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" FOR 90 M.P.H. WINDS.
- WELDING DESIGN AND FABRICATION SHALL CONFORM TO THE LATEST EDITION OF THE ANSI/AWS D1.2, STRUCTURAL WELDING CODE - ALUMINUM.
- FOR BASE CONNECTION WELDS, FABRICATION INSPECTION AND TESTING SHALL BE PERFORMED AS NECESSARY PRIOR TO ASSEMBLY, DURING ASSEMBLY, DURING WELDING, AND AFTER WELDING, TO ENSURE THAT MATERIALS AND WORKMANSHIP MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. FABRICATION INSPECTION AND TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. VERIFICATION INSPECTION AND TESTING IS THE PREROGATIVE OF THE ENGINEER (CONNDOT).
- NON-DESTRUCTIVE TESTING FOR ALUMINUM SHALL BE AS FOLLOWS: A RANDOM 25% OF ALL BASE CONNECTION WELDS SHALL BE INSPECTED IN ACCORDANCE WITH ASTM E-165 STANDARD PRACTICE FOR LIQUID PENETRANT INSPECTION METHOD.

SIGNATURE BLOCK:

NO SCALE



CONNECTICUT **DEPARTMENT OF TRANSPORTATION** 

REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

TOWN(S):

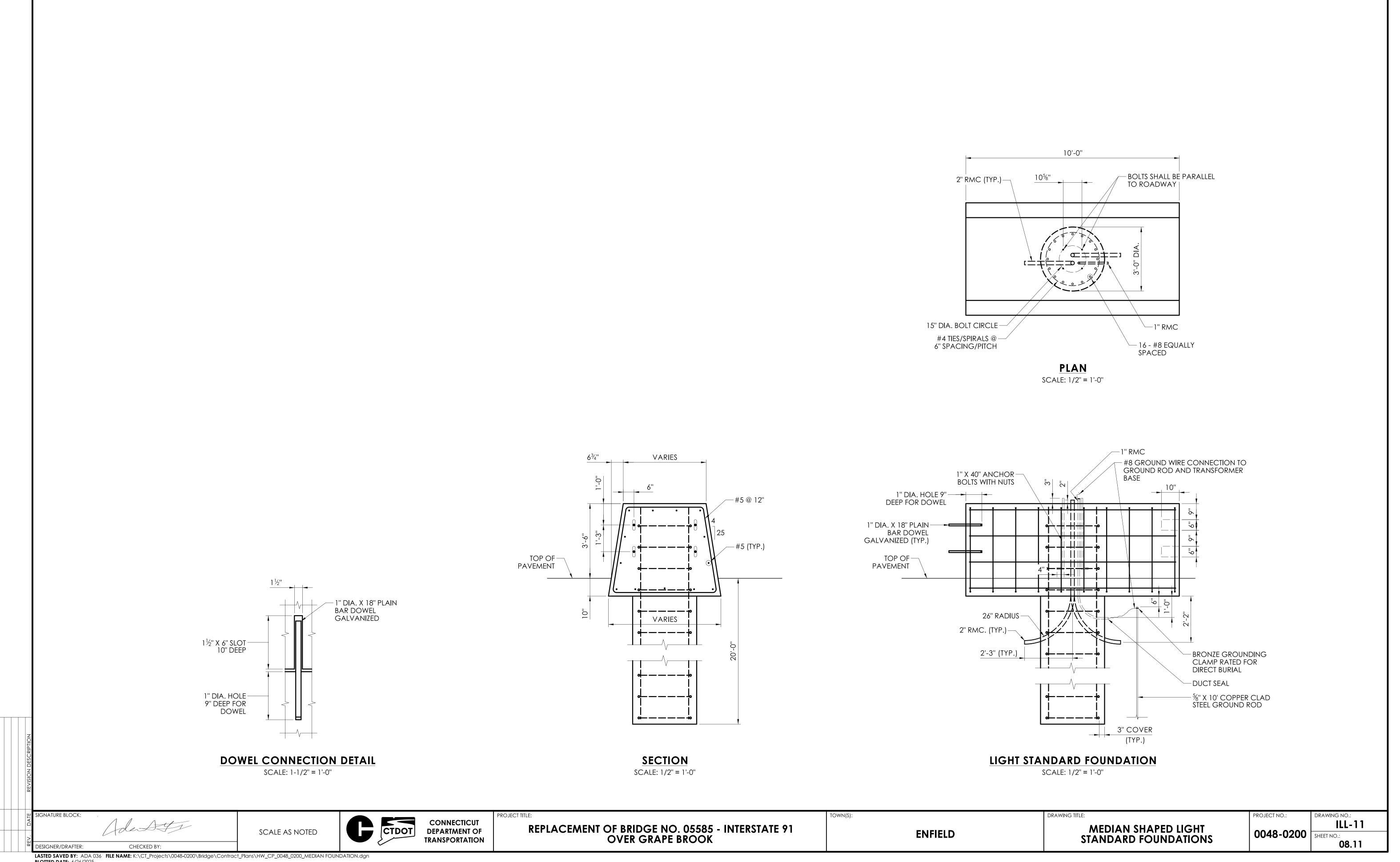
**ENFIELD** 

DRAWING TITLE:

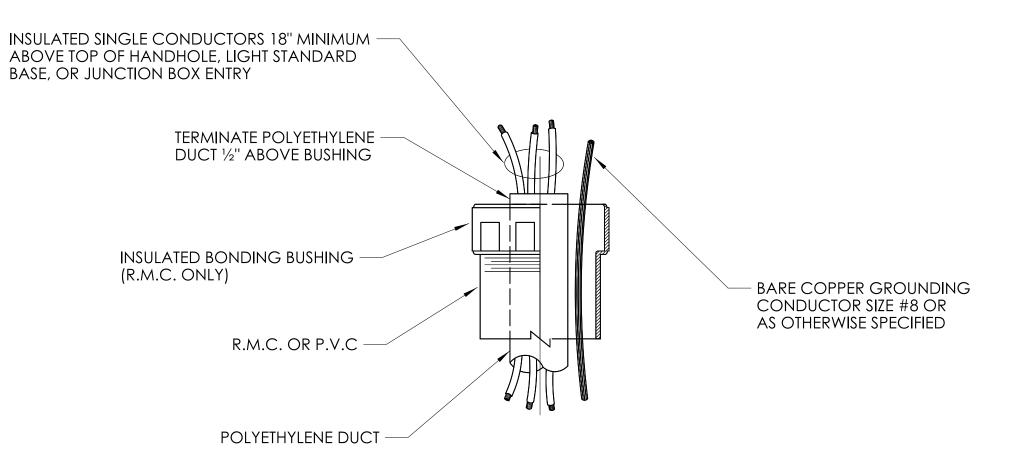
LIGHT STANDARD DIMENSION TABLE

PROJECT NO.:

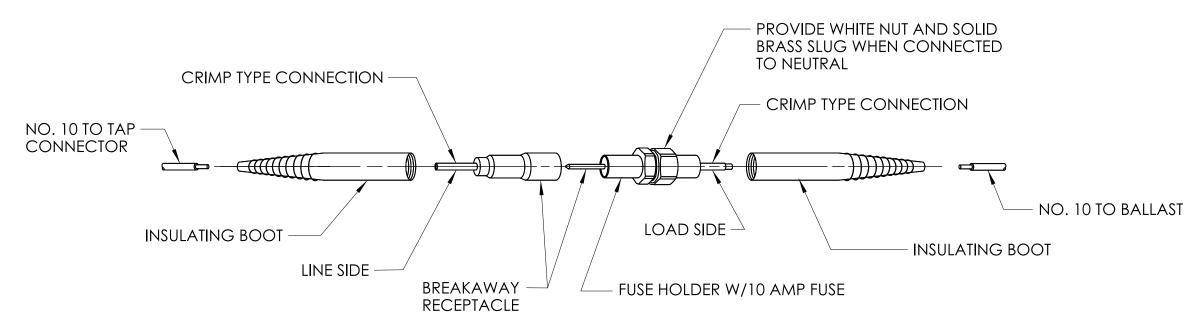
**ILL-10** 0048-0200 SHEET NO.: 08.10



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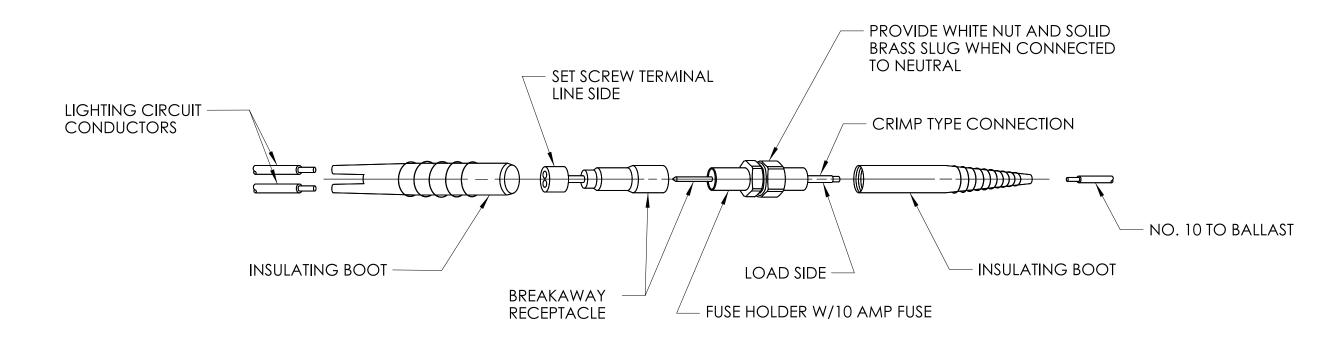


# CABLE IN DUCT TERMINATION AT LIGHT STANDARD BASE, HANDHOLE AND CAST IRON JUNCTION BOX

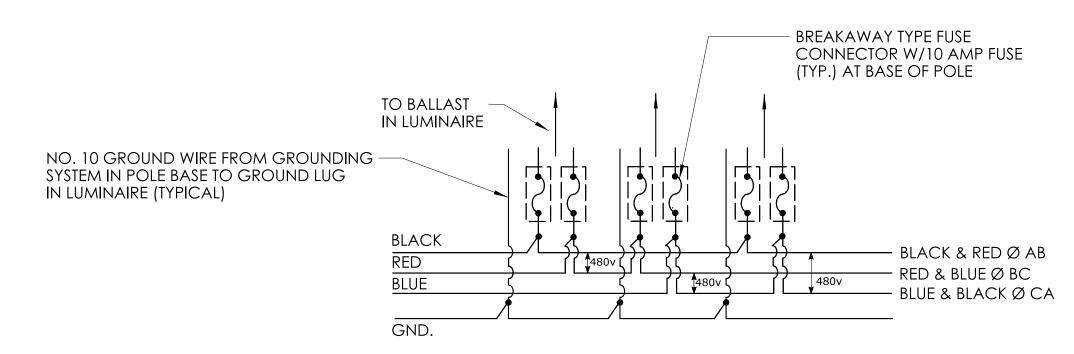


# BREAKAWAY FUSE CONNECTOR

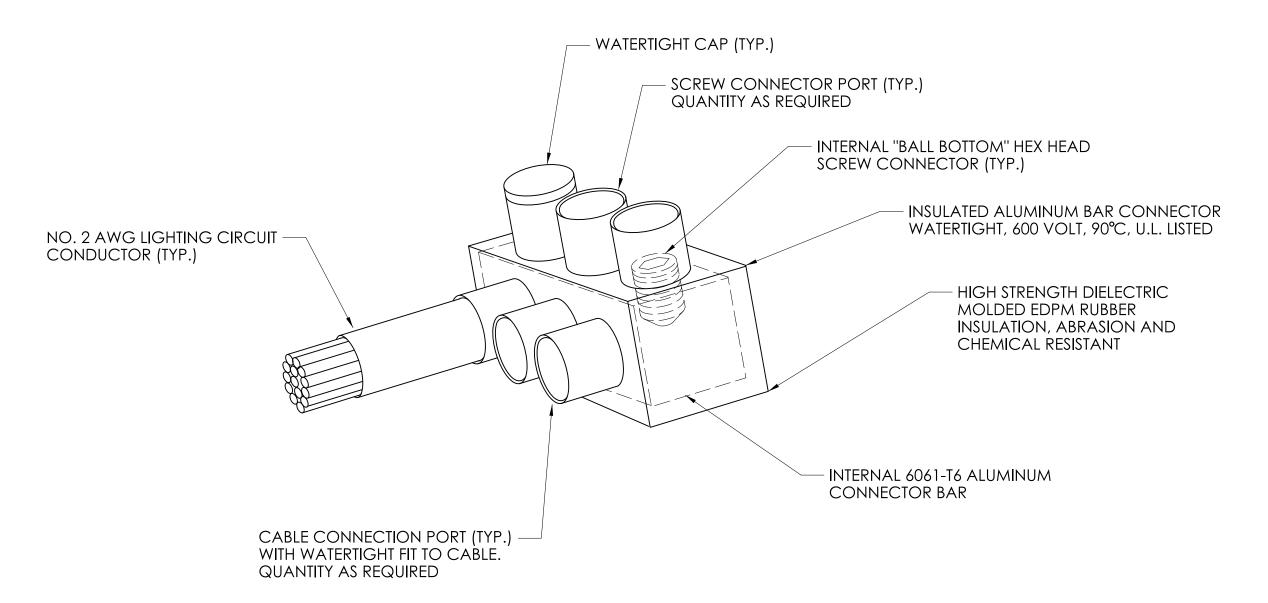
TO BE USED WITH TWIN LUMINAIRE LIGHT STANDARDS (4 REQUIRED PER LIGHT STANDARD AND UNDERBRIDGE LUMINAIRES



# **BREAKAWAY FUSE CONNECTOR**

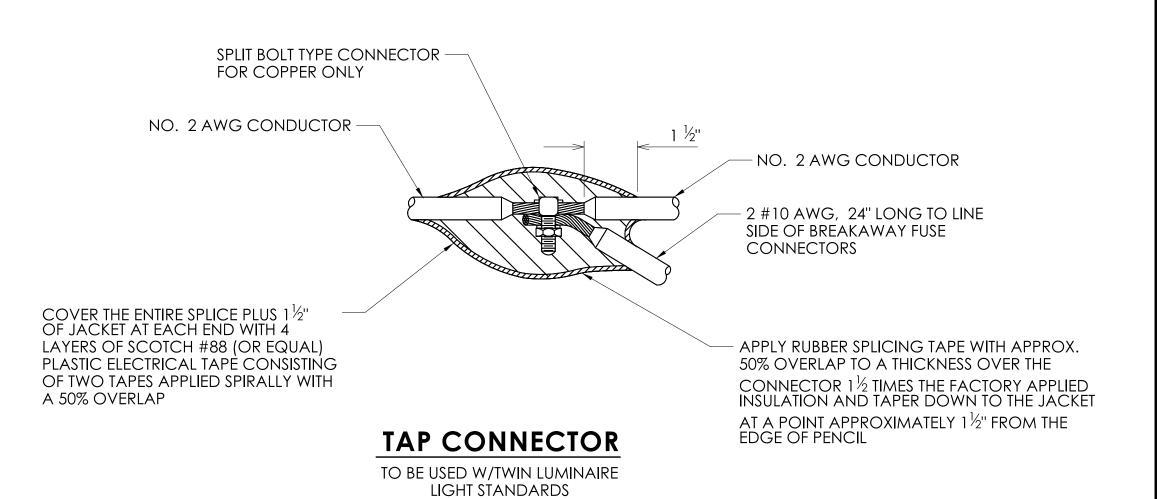


### **3 PHASE 3 WIRE SYSTEM**



# WATERTIGHT CONNECTOR

TO BE USED IN HANDHOLES AND JUNCTION BOXES



SIGNATURE BLOCK:

DESIGNER/DRAFTER: JDV

Adelys

NO SCALE

CTDOT

CONNECTICUT **DEPARTMENT OF TRANSPORTATION** 

REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

TOWN(S): **ENFIELD** 

ELECTRICAL CONNECTIONS

DRAWING TITLE:

**ILL-12** 0048-0200 SHEET NO.:

08.12

LASTED SAVED BY: VeturisJD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-12\_ELECTRICAL CONNECTIONS.dgn
PLOTTED DATE: 9/16/2025

#### CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL ORGANIZE THE WORK SO THAT ANY PORTION OF THE ROADWAY WHICH HAS EXISTING ILLUMINATION AND IS OPEN FOR USE REMAINS LIGHTED. THE LIGHTING MAY CONSIST OF: 1) EXISTING LIGHTING, 2) NEW LIGHTING, 3) TEMPORARY LIGHTING, OR ANY COMBINATION OF THE ABOVE. TÉMPORARY LIGHTING SHOWN ON THESE PLANS SHALL SERVE AS A FRAMEWORK FOR PROVIDING TEMPORARY ILLUMINATION. ADJUSTMENTS TO THE PROPOSED TEMPORARY LIGHTING DESIGN TO ALLOW FOR VARIOUS CONSTUCTION ACTIVITIES WILL BE ALLOWED PROVIDED THE CONTRACTOR SUBMIT THOSE ADJUSTMENTS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL MAINTAIN ALL LIGHTING THROUGHOUT THE DURATION OF THE PROJECT. SEE SECTION 10.00.14 OF THE SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
- THE CONTRACTOR SHALL ABIDE BY THE CDOT LOCKOUT/TAGOUT PROCEDURES WHEN ACCESS TO A CIRCUIT IS REQUIRED. THE CONTRACTOR SHALL CONTACT THE APPLICABLE DISTRICT ELECTRICAL SUPERVISOR FOR THE PROJECT AREA WHEN ACCESS TO A CIRCUIT IS REQUIRED, AS FOLLOWS:

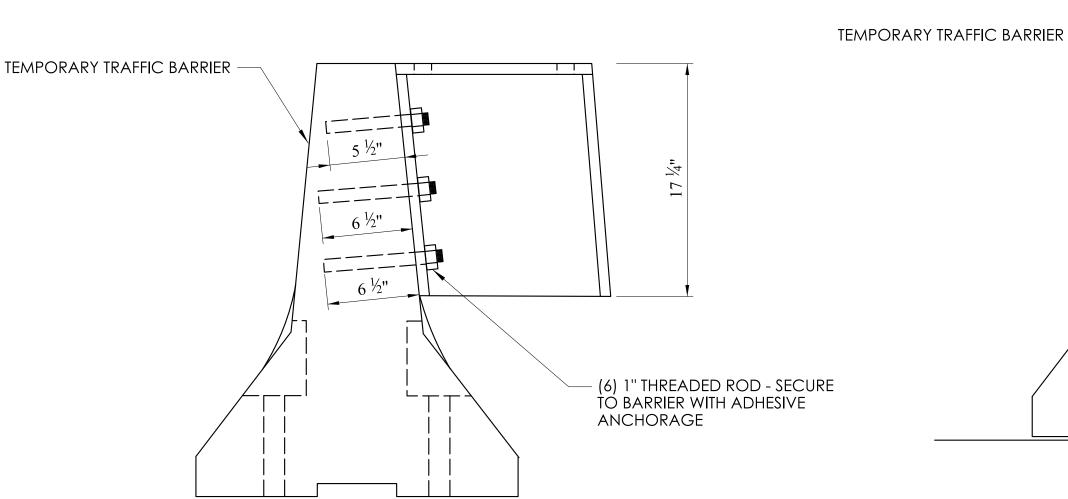
DISTRICT 1:860-566-3156

- 3) CONDUCTORS SHALL BE COPPER, INSULATION TYPE XHHW AND RATED FOR 600 VOLTS. INSULATION SHALL BE COLORED CROSS LINKED POLYETHELENE (XLP). THREE PHASE CIRCUIT COLORS SHALL BE AS FOLLOWS: BLUE, BLACK, RED.
- 4) INSTALL ONE NUMBER 8 BARE COPPER GROUNDING CONDUCTOR THROUGHOUT ALL LIGHTING CIRCUITS.
- 5) LUMINAIRE MOUNTING HEIGHT ON TEMPORARY LIGHT POLE SHALL BE 35'.
- 6) EXISTING LIGHTING CIRCUITS ARE 480 VOLT, 3 PHASE, 3 WIRE AND ARE FED FROM ONE OF THE FOLLOWING LIGHTING CONTROL CABINETS:

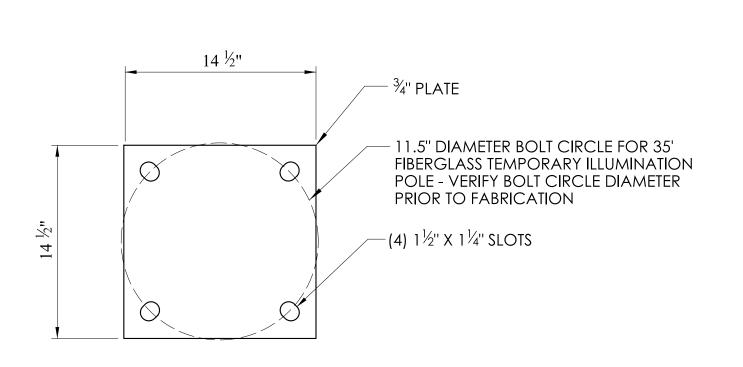
HAZARD AVE. (ROUTE 190), EXIT 47, I-91 N.B. RAMP ENFIELD STREET (ROUTE 5), EXIT 49, I-91 S.B. RAMP

- 7) STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A36.
- 8) THREADED RODS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A449 OR ASTM A193, GR. B7. HEX NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563 OR ASTM A194. CIRCULAR WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F436.
- 9) WELDING SHALL BE DONE IN CONFORMANCE WITH ANSI/AWS D1.1 STRUCTURAL WELDING
- 10) ADHESIVE ANCHORS SHALL BE IN ACCORNDANCE WITH ARTICLE 6.10.02 AND SHALL BE INSTALLED IN STRICT CONORMANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

THE DETAILS AND DIMENSIONS DEPICTED ON THIS DRAWING ARE DIAGRAMATIC IN NATURE. THE TEMPORARY SUPPORT BRACKET SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT THE TEMPORARY LIGHT STANDARD UNDER DESIGN LOADINGS CALLED OUT IN THE LATEST EDITION OF THE AASHTO PUBLICATION: "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS". THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND DESIGN CALCULATIONS FOR TEMPORARY LIGHT STANDARD ATTACHMENT BRACKETS IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 1.05.02. THE WORKING DRAWINGS AND DESIGN CALCULATIONS SHALL BE PREPARED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CONNECTICUT. THESE DRAWINGS SHALL BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH ARTICLE 1.05.02(3). SEE SPECIAL PROVISION NO. 1020998A TEMPORARY LIGHT STANDARD ATTACHMENT BRACKET FOR SPECIFIC REQUIREMENTS.

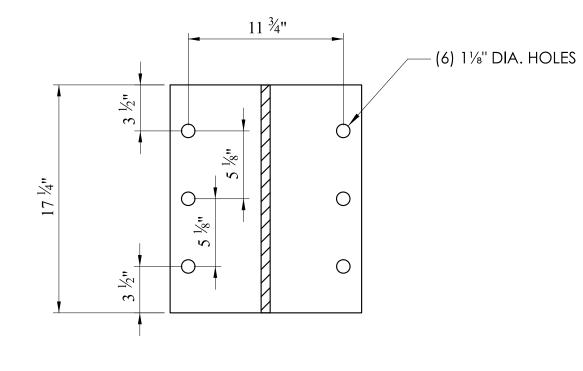


TEMPORARY BRACKET ATTACHMENT

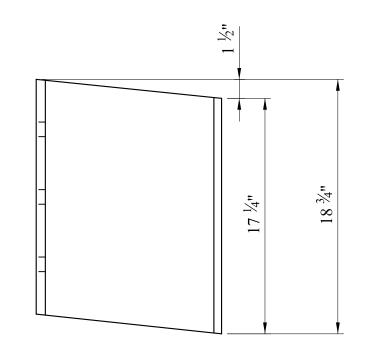


### CONNECTION PLATE DETAIL

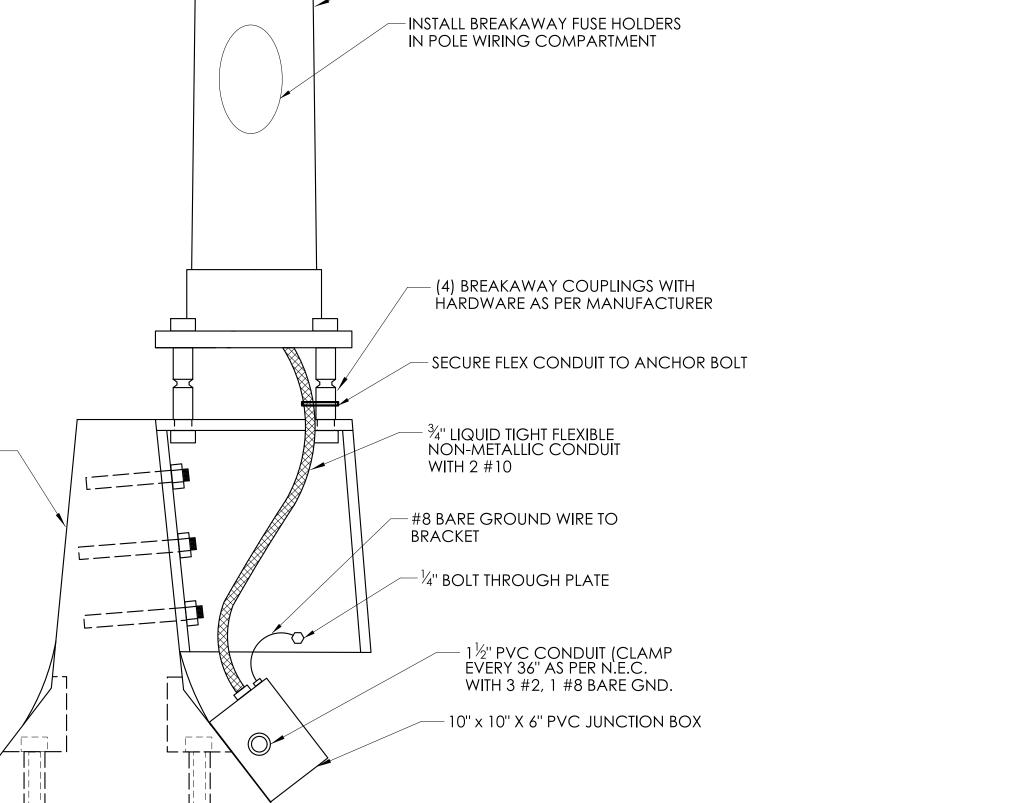
TEMPORARY ILLUMINATION UNIT



11 ¾"



**BRACKET DETAIL** 



TEMPORARY LIGHT STANDARD ATTACHMENT

SIGNATURE BLOCK:

DESIGNER/DRAFTER: JDV

Ade A 41

CTDOT

CONNECTICUT **DEPARTMENT OF TRANSPORTATION** 

REHABILITATION OF BRIDGE NO. 05585 CARRYING INTERSTATE 91 OVER GRAPE BROOK

**ENFIELD** 

town(s):

ADHESIVE BONDED ANCHORAGE)

FOR TEMPORARY TRAFFIC BARRIER ANCHORAGE (SEE LATEST HIGHWAY STANDARD DRAWING FOR

TEMPORARY LIGHT STANDARD ATTACHMENT **BRACKET** 

**ILL-13** 0048-0200 SHEET NO. 08.13

LASTED SAVED BY: McMenemyD FILE NAME: C:\Users\veturisjd\State of Connecticut\0048-0200 - Design\Illumination\Contract\_Plans\ILL-13\_TEMPORARY LIGHT STANDARD ATTACHMENT BRACKET.dgr